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# 1980 Insect Pest Management Guide

# COMMERCIAL VEGETABLE CROPS And GREENHOUSE VEGETABLES

Restricted-use insecticides are identified with an asterisk (\*).

You must be certified as a pesticide applicator to use restricted-use pesticides.

See your county Extension adviser in agriculture for information.

Commercial vegetables gardeners find it impossible to produce vegetables profitably unless they control insects at maximum efficiency and minimum cost. The housewife of today will not accept unsightly wormy vegetables; not only are wormy fruits and vegetables unappetizing but the waste from trimming increases food costs. Thus the commercial vegetable gardener must produce a quality product that is acceptable and safe to the consumer. Careful use of the right insecticides will enable him to do this.

Insect pest-management programs, which include the wise selection of cultural, mechanical, biological, and chemical methods, are suggested for the major insect pests of vegetable crops. Insecticides, though, are still the most efficient means of managing most insects.

This suggested insecticide guide has been prepared for use by Illinois commercial vegetable farmers; it is not for home gardeners, who should use only those insecticides that are extremely safe to handle, apply, and store. Furthermore, the commercial vegetable gardener must use a wider variety of insecticides than the home gardener in order to obtain maximum insect control at the least cost.

In using insecticides, read the label and carefully follow the instructions. Do not exceed maximum rates suggested; observe carefully the interval between application and harvest, and apply only to crops for which use has been approved. Make a record of the product used, the trade name, the percentage content of the insecticide, the dilution, the rate of application per acre, and the dates of application.

Some of the insecticides suggested here can be poisonous to the applicator. In using them, the commercial grower is expected to use precautions to protect himself, his workers, and his family from undue or needless exposure.

In using this guide, always refer to the table on the next page, which lists the limitations and restrictions on use. These limitations apply to the vegetables as human food. If you use any portion of a vegetable for livestock food (tops, stalks, etc.), refer to the label for instructions as to the interval required between application and feeding.

The chemical names used in these tables may be unfamiliar to you. These names are the common coined chemical names and as such are not capitalized. Trade names are capitalized. In the table of limitations the common names are listed first. If the trade name is more commonly used, it is listed in parentheses following the common name. Throughout the tables of suggestions, however, the common name is used if there is one. In case you have a question, refer to the table of limitations.

These suggestions are subject to change without notification during the growing season.

Requested label clearances for a few uses of insecticides, carriers, and solvents are uncertain for 1980, since many requests have not been officially cleared. Anticipating needed changes in labeling, we began modifying these suggested uses a few years ago.

Check with your county Extension adviser if you are in doubt about the insecticide you plan to use. We will make announcements of label changes through newsletters and the news media to keep you up to date.

Insecticides are being classified for general use or restricted use by the U.S. Environmental Protection Agency. A person wishing to use an insecticide classified for restricted use must be certified as a private or commercial pesticide applicator by the Illinois Department of Agriculture. Contact your county Extension adviser in agriculture for details on this program.

A few insecticides have been classified at this time. More will be classified later.

Suggestions for the effective use of insecticides from a practical standpoint are based on available data. Soil textures, pH of the soil, rainfall, slope of the field, wind velocity at planting, method and accuracy of application, and other unpredictable factors affect efficiency.

This publication was prepared by entomologists of the University of Illinois College of Agriculture and the Illinois Natural History Survey.

## LIMITATIONS FOR FIELD VEGETABLES IN DAYS BETWEEN APPLICATION AND HARVEST AND OTHER RESTRICTIONS ON USE OF INSECTICIDES IN ILLINOIS

(Blank spaces indicate that the material is not suggested for the specific use in Illinois)

Insecticide	Beans	Peas	Broc- coli	Brussels sprouts	Cab- bage		Horse- radish	Rad- ish	Tur- nip	Onions	Egg- plant	Pep- pers	Toma- toes
acephate (Orthene)									• • • •			7	•••
*azinphosmethyl (Guthion)2			15	7	21	15			• • • •				
Bacillus thuringiensis <sup>3</sup>			0	0	0	0			• • • •	l			0
carbaryl (Sevin)	0		3	3	3	3	3	3	3, 14A	l	0	0	0
carbofuran (Furadan)	[											21B	
Dasanit					• •					C, D			• •
*demeton (Systox)												3	••
diazinon		1	5		7	5		10	10	10	• •	• •	1
dicofol (Kelthane)	7E	1					• •				2	2	2
dimethoate (Cygon)	0E	0E	7		3	7	• •	••	14		••	ō	7
Dyfonate			C	• •	C	Ċ		••			• •	••	• •
ethion			••	• •			• •	• •	••••	C		••	
malathion	i		3	7	7	7	7	7	3	3	3	3	1
methomyl (Lannate)	1	1, 5A	3	3	1	3						10	$\bar{2}$
mevinphos (Phosdrin)2			1	3	1	3	••	• •	3				
Monitor			21	21	35	28		• •			• • •	• • •	
naled (Dibrom)			1	1	1	1	• • •		4		• • •	••	• • •
oxydemetonmethyl			-	-	-	-	••	••	_		••	••	••
(Meta-Systox R)											7F	0B	
*parathion2	7		7	7	10	7	• •	15	10		15	15	10
phorate (Thimet) <sup>2</sup>	ċl	1	-	•		-					-		
rotenone			• •	• •	• •	• •	• •	• •	• • • •	1	1	1	1
trichlorfon (Dylox)			• •	21	21	21	• •	• •	28E		• • •	21	21

	Pota-	Col-		Let-	Spin-	Swiss	Sweet	Cucum-	Mel-	Pump-	Sq	uash¹
Insecticide	toes	lards	Kale	tuce	ach	chard	corn	bers1	ons <sup>1</sup>	kins <sup>1</sup>	Winter	Summer
Bacillus thuringiensis <sup>3</sup>		0	0	0	0	••	l	1		••		
carbaryl (Sevin)	0	14	14	14	14	14	0	0	0	0	0	0
carbofuran (Furdan)	14H											
diazinon		10	10	10	10	12	С	7	3		3	7
dicofol (Kelthane)								2	2	2	2	2
dimethoate (Cygon)	0	14	14	14	14	14			3			• •
Dyfonate							C					
malathion	0	7	7	14	7	7	5	1	1	3	1	1
*methomyl (Lannate)	6			10	7		0, 3A	3	3	• •		3
*mevinphos (Phosdrin)2		3	3	2	4			<b></b>				
Mocap						• •	C			• •		• •
Monitor	14		• •	• •							• •	
naled (Dibrom)		4	4	1	1	1					• •	
*parathion <sup>2</sup>	5	10	10	21	14	21	12	15	7	10	15	15
phorate (Thimet) <sup>2</sup>	С		• •				С					
rotenone		1	1	1	1	1			• •			
trichlorfon (Dylox)		28G	21	28G	• •	• •		••	• •	3F	• •	••

<sup>\*</sup> Use restricted to certified applicators only.

- A. If tops or stover are to be used for feed.
- B. Not more than twice per season.
  C. Soil applications at planting time
  D. Do not use on green onion crop. Not more than twice per season. Soil applications at planting time only.
- E. Do not use tops for feed or food. F. Not more than 3 times per season.
- G. Not after edible portions or heads begin to form. H. Not more than 8 times per season.

#### REENTRY INTERVALS FOR WORKER PROTECTION

Insecticide	Hours
azinphosmethyl (Guthion)	
demeton (Systox)	48 24
parathion	48

Workers must wear protective clothing if they enter treated fields before the time intervals shown at the right. They must also wear protective clothing for all other insecticides applied if the spray has not dried or the dust has not settled.

<sup>&</sup>lt;sup>1</sup> Apply insecticides late in the day after the blossoms have closed The trade names are Bactur, Dipel, and Thuricide.

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### CABBAGE AND RELATED COLE CROPS

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Cabbage maggots <sup>1</sup> (NHE-44)	All season	diazinon Dyfonate	3 2	Broadcast	Disk in just before planting. Use only for cabbage, cauliflower, and broccoli.
		diazinon granules	1	Furrow	At time of planting; on turnips a drenching spray of 1 lb. diazinon should be applied 30 days following treatment.
		*azinphosmethyl	3 oz. W.P. or 2 oz. E.C. per 50 gal. transplant water 4 oz. per 50 gal. transplant water		6 fluid oz. transplant water per plant.
Aphids (NHE-47) Thrips (NHE-48)	All season	*azinphosmethyl dimethoate malathion *mevinphos *parathion	3/4 0.3 1 1/4 0.4	Foliage	When aphids appear, but before leaves begin to curl.
Diamond-back moth larvae; imported cabbage worms; cabbage loopers (NHE-45)	All season	Bacillus thuringiensis *methomyl Monitor	See rates on label 0.45-0.9 1	Foliage	When small worms first appear, and about every 5 to 7 days thereafter. Thorough spray coverage of foliage is important.
Cutworms	At planting	trichlorfon	1	Soil	At planting, at base of plant or as needed when damage first occurs.
Flea beetles and leashoppers	All season	carbaryl	1½	Foliage	As needed.

E.C. = emulsion concentrate; W.P. = wettable powder.

# COLLARDS, KALE, LETTUCE, SPINACH, SWISS CHARD

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Aphids (NHE-47)	All season	diazinon dimethoate *mevinphos naled *parathion	1/2 0.3 1/4 1 0.4	Foliage	As needed.
Cutworms	On seedling plants	trichlorfon	1	Base of plant and soil	When first damage appears.
Leafhoppers	All season	carbaryl dimethoate malathion	1½ 0.3 1	Foliage	When first leafhoppers appear, and as needed.
Caterpillars (NHE-45)	All season	Bacillus thuringiensis methomyl <sup>1</sup> naled	See rates on label 0.45 1	Foliage	When small worms first appear and every 5 to 7 days thereafter.
Leaf miners	All season	diazinon dimethoate *parathion	½ 0.3 0.4	Foliage	When first miners are observed.
Flea beetles	All season	carbaryl rotenone	1 1⁄4	Foliage	As needed.

<sup>\*</sup> Use restricted to certified applicators only. 'Use limited to lettuce and spinach only.

<sup>\*</sup> Use restricted to certified applicators only. 1 Maggots are resistant to diazinon in some areas of Illinois.

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Seed maggots (NHE-27)	All season	diazinon 50% W Lorsban 25% W		Seed Seed	Treat seed no longer than 3 months before planting.
		phorate granules	1½	Soilband	Place on either or both sides of row at planting but not in contact with seed.
Bean leaf beetles (NHE-67)	Early and late season	carbaryl malathion	1 1	Foliage	When feeding first appears and weekly for 2 or 3 applications as needed.
Leafhoppers (NHE-22) and plant bugs (NHE-68)	All season	carbaryl dimethoate malathion *methomyl	1 0.3 1 0.45	Foliage	Before plants become yellow and stunted. Repeat applications at weekly intervals as necessary.
		phorate granules	1½	Soilband	As for seed maggot.
Mexican bean beetles	Midseason and late season	carbaryl malathion	½ 1	Foliage	When occasional leaves show lacework feeding.
		phorate granules	11/2	Soilband	As for seed maggot.
Aphids (NHE-47)	All season	dimethoate malathion	0.3 1	Foliage	Usually applied when a few aphids can be found on each plant, but before leaves begin to curl and deform.
		phorate granules	1½	Soilband	As for seed maggot.
Blister beetles (NHE-72)	Midseason and late season	carbaryl	1½	Foliage	As needed.
Corn earworms (NHE-33) Corn borers	Late season	carbaryl *methomyl *parathion	1½ 0.45 ½	Foliage	As needed, but usually after August 20. Worms may be present before bloom.
Mites	Midseason and late season	dicofol dimethoate malathion	0.4 0.3 1	Foliage	As needed, but especially during drouthy periods particularly if carbaryl has been used on crops.
		phorate granules	1½	Soilband	As for seed maggot.

<sup>\*</sup> Use restricted to certified applicators only. ¹ No restrictions when used as recommended.

#### CUCUMBERS AND OTHER VINE CROPS1

Insect	Time of attack	Insecticide <sup>2</sup>	Pounds of active ingredient per acre	Placement	Timing of application <sup>1</sup>
Striped and spotted cucumber beetles (NHE-46)	Seedling to mature plants	carbaryl *parathion	1 ½	Foliage	When beetles first appear; as often as necessary thereafter.
Aphids (NHE-47)	All season	diazinon dimethoate² malathion *parathion	½ 0.3 1 ½	Foliage	When aphids become noticeable.
Squash bugs (NHE-51)	All season	*parathion trichlorfon³	1/ <sub>2</sub> 1	Foliage	Do not apply until first eggs are found hatching (about June 15 to July 15).
Leafhoppers	July-August	malathion dimethoate <sup>2</sup>	1 0.3	Foliage	As needed.
Squash vine borers	June- September	carbaryl	1	Base of stem for 3 ft.	Weekly applications when vines begin to run—usually 5 applications.
Pickle worms	August- September	carbaryl	1	Foliage	Weekly applications, beginning in late August.
Mites	July- September	dicofol malathion *parathion	1/2 1 1/2	Foliage	As needed.
Cutworms (NHE-77)	April-June	carbaryl	2	Base of plants	As needed.

<sup>\*</sup> Use restricted to certified applicators only.

<sup>&</sup>lt;sup>1</sup> Spray vine crops with insecticide only late in the day after blossoms have closed to reduce bee kill. <sup>2</sup> Do not use dimethoate on cucumbers. <sup>3</sup> Pumpkin is the only vine crop for which trichlorfon can be used for squash bug control.

# TOMATOES AND EGGPLANT

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Cutworms (NHE-77)	Early and midseason	carbaryl trichlorfon	2 1	Base of plants or foliage	
Flea beetles	May-June	carbaryl rotenone	2 0.2-0.4	Foliage	Apply every week as long as needed.
Aphids (NHE-47)	May-July	diazinon dimethoate <sup>1</sup> malathion *parathion	0.3 1 0.4	Foliage	As needed, but before leaves curl.
Cabbage loopers	July- September	Bacillus thuringiensis *methomyl	See rates on label 0.45-0.9	Foliage	When loopers are present.
Corn earworms Corn borers	July- September; occasionally in June	carbaryl *methomyl <sup>1</sup>	2 0.45-0.9	Foliage	Add to weekly applications of fungicide sprays beginning at first fruit set. If spraying is infrequent, use 6 lb. of toxaphene.
Hornworms	July- September	carbaryl trichlorfon	2 1	Foliage	When first small worms appear.
Mites	July- September	carbophenothion dicofol malathion *parathion	1 ½ 1 0.4	Foliage	As needed.
Russet mites	July- September	*parathion sulfur dust² sulfur spray²	0.4 10 10	Foliage	As needed.
Blister beetles (NHE-72)	June- September	carbaryl *parathion	1½	Foliage	As needed.
Fruit flies and picnic beetles	August- October	diazinon spray diazinon granules	1/2 1	Foliage	When flies or beetles first appear.
•		pyrethrin dust <sup>2</sup>	1	Foliage	Apply to hamper immediately after it is filled.

<sup>\*</sup> Use restricted to certified applicators only. ¹ Use cleared only on tomatoes. ² No limitations on use.

### **PEPPERS**

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Aphids (NHE-47)	May-July	dimethoate demeton *methomyl oxydemetonmeth acephate	0.3 <sup>3</sup> / <sub>8</sub> 0.45 yl ½ ½	Foliage	Only when aphids are present. Add to borer spray when it is being used.
Corn borers	Late season	carbaryl acephate	2 1	Foliage and fruit	When fruit is present on plant. Apply every 5 days when borers are present.
		carbofuran	2-3	Soilband to transplant	Make 2 applications; first, 3 weeks after transplant, second, 5 weeks later.

<sup>\*</sup> Use restricted to certified applicators only.

# **ASPARAGUS**

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Asparagus beetles (NHE-49)	Early and mid- season on spears and ferns	carbaryl¹ malathion¹ rotenone¹	1½ 1 0.2-0.4	Spears and ferns Spears	As needed, not more often than every 3 days. As needed.

One-day restriction between last application and harvest.

#### SWEET CORN

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Soil insects (NHE-26, 27, 43)	April-August	diazinon Dyfonate Mocap phorate	1 1 1 1	Row	Apply on soil surface behind planter shoe and ahead of press wheel. Rootworm con- trol may be needed if the corn was not sprayed the previous year.
Cutworms (NHE-38)	April-June	carbaryl¹ carbaryl bait	2-3 1	Base of plants	When first damage appears.
Flea beetles (NHE-36)	April-July	carbaryl <sup>1</sup>	1½	Foliage	As necessary.
Japanese beetles (NHE-32)	July- September	carbaryl <sup>1</sup>	1	Ear zone	As necessary.
First-generation corn borers	June	carbaryl <sup>1</sup>	2	Foliage	Make first application when tassel ratio is 30 to 40. Repeat in 4 to 5 days.
Second-generation corn borers and corn earworms <sup>2</sup> (NHE-33)	June- September	carbaryl¹ *methomyl	2 0.45	Ear zone	Fresh market corn: At first silk and every 2 to 3 days for 5 to 8 applications. Canning corn: Observe light traps for earworm and borer adults, or keep a record of the heat units. When 1,500 or more heat units have accumulated, begin a spray program. As an alternative, begin at 30 to 50% silk and every 3 days thereafter until the corn is within 8 to 12 days of harvest.
Sap beetles (NHE-10) Picnic beetles	July- September	carbaryl <sup>1</sup> diazinon malathion *parathion	2 1 1 1 ½	Foliage	When adults first appear in field; usually between pollen-shedding and silk-drying.
Corn leaf aphids (NHE-29)	July- September	malathion *parathion	1 1/2	Foliage	As needed to produce attractive ears for fresh market.
Fall armyworms	July- September	*methomyl *parathion	0.45 ½	Foliage	Apply to ear zone when whorl feeding is evident.

<sup>\*</sup> Use restricted to certified applicators only.

#### **ONIONS**

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Onion maggots (NHE-50)	All season	diazinon W.P. ethion W.P.	½-1 for 40-50 lb. of seed 1 for 40-50 lb. of seed	Seed	Seed treatment for set onions only. Use lighter dosage of diazinon on sandy, highly mineral soils.
		Dasanit granule diazinon granule Dyfonate ethion granules		Furrow	Use 1 lb. active ingredient per acre for rows 12" apart; ¾ lb. for rows 18" apart; ½ lb. for rows 24" apart. Up to twice these amounts are needed for ethion on muck soils. Do not use Dasanit or Dyfonate on green onions.
		diazinon	2	Broadcast	Preplanting; disk into upper 1 to 2 inches of soil. Supplement with foliage spray below.
		diazinon	1/3	Foliage	Supplemental to soil treatment. Make first application when first adult flies are
		malathion	1		seen; make another 1 week later. From then on only as necessary.
Thrips (NHE-48)	Midseason and late season	diazinon malathion *azinphosmethyl (Guthion)	1/2 1 1/2	Foliage	When injury first appears and every 10 days as necessary.

<sup>\*</sup> Use restricted to certified applicators only.

<sup>&</sup>lt;sup>1</sup> During pollen shed, apply carbaryl as late in the day as possible (preferably after 4 p.m.) to reduce bee kill. <sup>2</sup> Adding 0.5 to 0.75 pound of parathion or 0.25 to 0.45 pound of methomyl to carbaryl improves earworm control.

### **POTATOES**

Insect	Time of attack		Pounds of active ngredient per acre	Placement	Timing of application
Flea beetles	May-July	carbaryl	1	Foliage	When damage first appears on the leaves. Repeat as needed.
		carbofuran granule	es 3	In furrow	Planting time.
		carbofuran spray	1	Foliage	Planting time.
		*methomyl	0.45	Foliage	Planting time.
		Monitor	. 1	Foliage	Planting time.
Colorado potato	May-July	carbaryl	1	Foliage	As needed.
beetles		carbofuran granule	es 3	In furrow	Planting time.
		carbofuran spray	1	Foliage	Planting time.
		Monitor	1	Foliage	Planting time.
Potato leafhoppers (NHE-22)	May-July	carbaryl	1	Foliage	Weekly applications when the leafhoppers first appear.
		carbofuran granul	es 3	In furrow	Planting time.
		carbofuran spray	1	Foliage	Planting time.
		dimethoate	0.3		
		*methomyl	0.45		
		Monitor	1	Foliage	Planting time.
		phorate granules	2-3	Soilband	Place on either or both sides of row at planting, but not in contact with seed. Use the lower rate on sandy soils, the heavier rate on heavy soils. Do not use on muck soils.
Aphids (NHE-47)	All season	dimethoate	0.3	Foliage	As needed.
•		Monitor	1		
(		*methomyl	0.45		
		*parathion	1/4		
		phorate granules	2-3	Soilband	Same as for leafhoppers.
Cutworms	May-July	carbaryl	2	Foliage	As needed.
Blister beetles (NHE-72)	All season	carbaryl	11/2	Foliage	As needed.
Wireworms (NHE-43) All season White grubs (NHE-23)		phorate granules	2-3	Soil	Preplanting, disk in; or use as soilband at planting.
Grasshoppers July- (NHE-74) September		carbaryl dimethoate	<sup>3</sup> ⁄ <sub>4</sub> 0.3	Foliage	As needed, control in fence rows, road- sides, ditch banks, etc., before migration.

<sup>\*</sup> Use restricted to certified applicators only.

### **PEAS**

Insect	Time of attack	Insecticide	Pounds of active ingredient per acre	Placement	Timing of application
Caterpillars, including loopers	June	*methomyl	1/2-1	Foliage	Before harvest if worms are present.
Aphids	May-June	dimethoate	1/3	Foliage	As needed.

<sup>\*</sup> Use restricted to certified applicators only.

### **Limitations for Greenhouse Tomatoes**

Insecticide	Tomatoes
endosulfan (Thiodan) malathion metaldehyde	
*parathion1	10 days

<sup>\*</sup> Use restricted to certified applicators only.

<sup>&</sup>lt;sup>1</sup> Do not use acrosols that contain parathion or the propellant methyl chloride in greenhouses connected to living quarters.

#### **GREENHOUSE TOMATOES**

Insect	Insecticide <sup>1</sup>	Dosage and formulation	Application
Aphids	malathion aerosol	1 lb. 10% aerosol per 50,000 cu. ft.	In a closed greenhouse above plants.
Whiteflies	naled vapor	5 oz. of 4% E.C. per 50,000 cu. ft.	Apply on steampipes.
	*parathion aerosol	1 lb. 10% aerosol per 50,000 cu. ft.	In a closed greenhouse above plants.
Mealybugs Spider mites Russet mites Thrips		Use malathion or parathion aerosol as su	ggested for aphid and whitefly.
Armyworms Cabbage loopers Cutworms Tomato fruitworms	malathion aerosol	1 lb. 10% aerosol per 50,000 cu. ft.	In a closed greenhouse above plants.
	*parathion aerosol	1 lb. 10% aerosol per 50,000 cu. ft.	In a closed greenhouse above plants.
Slugs	metaldehyde	Commercially prepared bait or spray	To mulch on soil surface. Do not contaminate edible parts.

<sup>\*</sup> Use restricted to certified applicators only.

#### FOR ADDITIONAL INFORMATION

Obtain the following circulars on insect control from the Office of Agricultural Publications, 123 Mumford Hall, Urbana, Illinois 61801.

Circular 899, 1980 Insect Pest Management Guide — Field and Forage Crops

Circular 900, 1980 Insect Pest Management Guide — Home, Yard, and Garden

Circular 1076, Turfgrass Pest Control

Leaflets describing the life history, biology, and habits of some of the insects mentioned can be obtained from the offices of county Extension advisers or by writing to Entomology Extension, 172 Natural Resources Building, Urbana, Illinois 61801. These are indicated by an NHE number in the tables.

#### FOR YOUR PROTECTION

Always handle insecticides with respect. The persons most likely to suffer ill effects from insecticides are the applicator and his family. Accidents and careless, needless overexposure can be avoided. Here are a few easy rules that if followed will prevent most insecticide accidents:

- 1. Wear rubber gloves when handling insecticide concentrates.
  - 2. Do not smoke while handling or using insecticides.
- 3. Keep your face turned to one side when opening insecticide containers.
- 4. Leave unused insecticides in their original containers with the labels on them.
- 5. Store insecticides out of reach of children, irresponsible persons, or animals; store preferably in a locked cabinet.
- 6. Triple-rinse and bury or burn all empty insecticide containers or take to an approved sanitary landfill.
- 7. Do not put the water-supply hose directly into the spray tank.

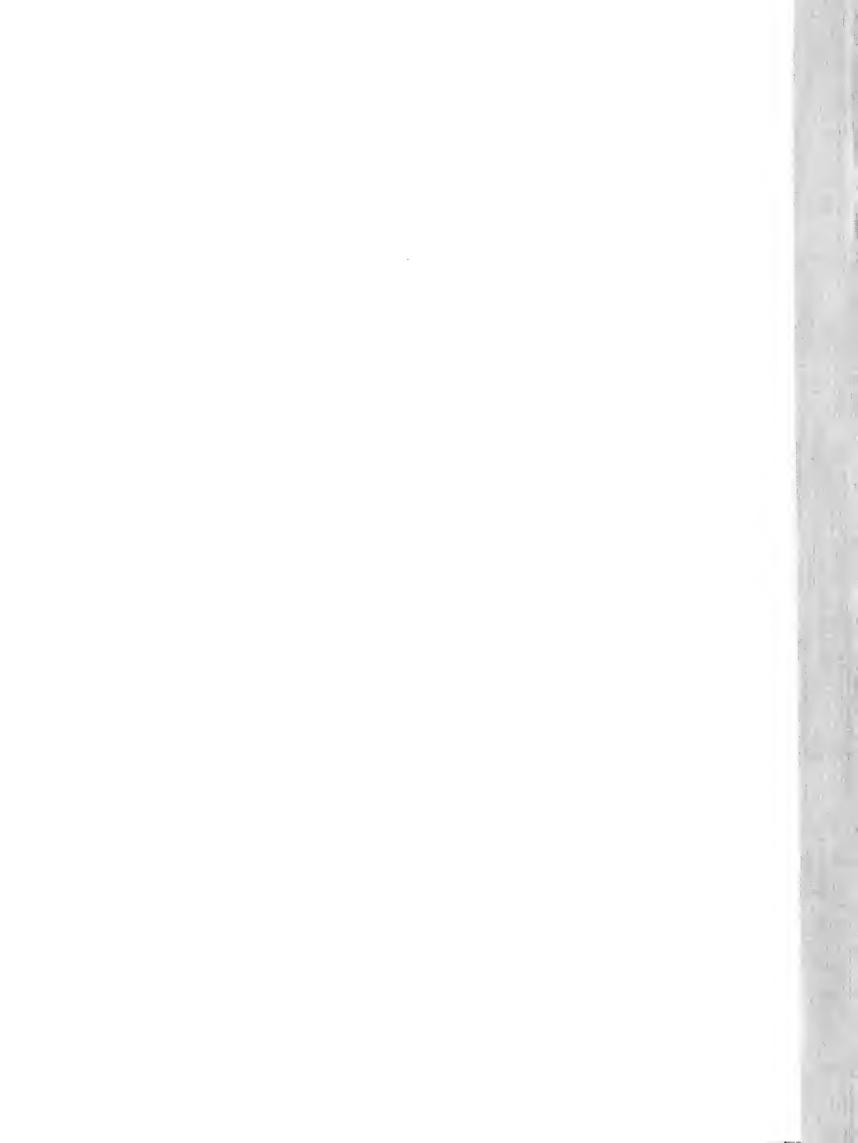
- 8. Do not blow out clogged nozzles or spray lines with your mouth.
- 9. Wash with soap and water exposed parts of body and clothes contaminated with insecticide.
- 10. Do not leave puddles of spray on impervious surfaces.
  - 11. Do not apply to fish-bearing or other water supplies.
- 12. Do not apply insecticides, except in an emergency, to areas with abundant wildlife or to blossoming crops visited by bees. Avoid drift onto blossoming crops or onto bee hives.
  - 13. Do not apply insecticides near dug wells or cisterns.
  - 14. Do not spray when weather conditions favor drift.
  - 15. Observe all precautions listed on the label.
- 16. To avoid bee kill, apply insecticides after bee activity has been completed for the day; use the least toxic materials. Warn beekeepers that you are applying insecticides.

Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. JOHN B. CLAAR, Director, Cooperative Extension Service, University of Illinois at Urbana-Champaign. The Illinois Cooperative Extension Service provides equal opportunities in programs and employment.

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<sup>&</sup>lt;sup>1</sup> See page 7 for limitations between application and harvest.







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